

L Number	Hits	Search Text	DB	Time stamp
1	539	356/237.2.ccls.	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/07/15 14:29
2	1986	356/237.1.ccls.	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/07/15 14:30
4	3	356/237.1.ccls. and ((micro near defects) and (macro near defects))	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/07/15 14:31
3	38	(micro near defects) and (macro near defects)	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/07/15 14:54
5	65	4618938.URPN.	USPAT	2003/07/15 14:37
6	12	("4185298"   "4218142"   "4295198"   "4325077"   "4334241"   "4389669"   "4475122"   "4481664"   "4486776"   "4508453"   "4532650"   "4556317").PN.	USPAT	2003/07/15 14:37
7	604	both near4 sides near4 inspect\$4	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/07/15 14:54
8	37	defects same (both near4 sides near4 inspect\$4)	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/07/15 15:46
9	2	6031615.pn.	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/07/15 15:03
10	1	5986761.URPN.	USPAT	2003/07/15 15:03
11	5	("3885875"   "4125317"   "4332477"   "4427295"   "5581353").PN.	USPAT	2003/07/15 15:22
12	2	5872632.pn.	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/07/15 15:47
13	6	5872632.URPN.	USPAT	2003/07/15 15:48
14	4	("5293216"   "5296405"   "5386119"   "5410162").PN.	USPAT	2003/07/15 15:48

L Number	Hits	Search Text	DB	Time stamp
1	2927	critical near3 dimension\$ same (measur\$4 or detect\$4 or determin\$4)	USPAT; US-PPGPUB; EPO; JPO; DERWENT	2003/07/15 09:45
2	75114	356/\$.ccls.	USPAT; US-PPGPUB; EPO; JPO; DERWENT	2003/07/15 09:51
3	221	(critical near3 dimension\$ same (measur\$4 or detect\$4 or determin\$4)) and 356/\$.ccls.	USPAT; US-PPGPUB; EPO; JPO; DERWENT	2003/07/15 09:39
4	286443	wafer	USPAT; US-PPGPUB; EPO; JPO; DERWENT	2003/07/15 09:40
5	147	((critical near3 dimension\$ same (measur\$4 or detect\$4 or determin\$4)) and 356/\$.ccls.) and wafer	USPAT; US-PPGPUB; EPO; JPO; DERWENT	2003/07/15 09:42
6	4184	pump near4 beam	USPAT; US-PPGPUB; EPO; JPO; DERWENT	2003/07/15 09:43
7	6345	probe near4 beam	USPAT; US-PPGPUB; EPO; JPO; DERWENT	2003/07/15 09:43
8	409	(pump near4 beam) and (probe near4 beam)	USPAT; US-PPGPUB; EPO; JPO; DERWENT	2003/07/15 09:43
9	2	(critical near3 dimension\$ same (measur\$4 or detect\$4 or determin\$4)) and ((pump near4 beam) and (probe near4 beam))	USPAT; US-PPGPUB; EPO; JPO; DERWENT	2003/07/15 09:43
10	1172	critical near3 dimension\$ near4(measur\$4 or detect\$4 or determin\$4)	USPAT; US-PPGPUB; EPO; JPO; DERWENT	2003/07/15 09:45
11	1	((pump near4 beam) and (probe near4 beam)) and (critical near3 dimension\$ near4(measur\$4 or detect\$4 or determin\$4))	USPAT; US-PPGPUB; EPO; JPO; DERWENT	2003/07/15 10:23
12	24541	pump and probe	USPAT; US-PPGPUB; EPO; JPO; DERWENT	2003/07/15 09:48
13	23	(critical near3 dimension\$ near4(measur\$4 or detect\$4 or determin\$4)) and (pump and probe)	USPAT; US-PPGPUB; EPO; JPO; DERWENT	2003/07/15 09:48
14	106	356/\$.ccls. and (critical near3 dimension\$ near4(measur\$4 or detect\$4 or determin\$4))	USPAT; US-PPGPUB; EPO; JPO; DERWENT	2003/07/15 09:51
15	16	5757507.URPN.	USPAT	2003/07/15 10:07
16	6	("4529314"   "4568189"   "4820055"   "5216257"   "5262258"   "5402224").PN.	USPAT	2003/07/15 10:08
17	9	4863548.URPN.	USPAT	2003/07/15 10:15
18	2	("4141780"   "4650744").PN.	USPAT	2003/07/15 10:16
19	2	6054868.pn.	USPAT; US-PPGPUB; EPO; JPO; DERWENT	2003/07/15 10:24

DOCUMENT-IDENTIFIER: US 20030025905 A1

TITLE: Method of detecting and  
classifying scratches, particles and pits on thin  
film disks or wafers

----- KWIC -----

Detail Description Paragraph - DETX (21):

[0073] A problem in the magnetic recording industry is to inspect thin film disks for defects at the final test step of the manufacturer of disks. The manufacturers of thin film disks require that both sides of the thin film disk be inspected simultaneously. The problem is that the clearance between the disk and the chuck (which holds the disk) is only 1" or less (see FIG. 13, 1304). This requires that the optics be miniaturized in order to fit in the small space between the disk and the chuck (see FIG. 13). A solution to this problem can be obtained by using the optical designs in FIG. 8, 9, 10, and 11. These designs have several key improvements, which allow the design to be miniaturized without compromising the performance of the device. First of all the design uses the internal feedback photodiode, which is included within the laser diode 801, to achieve stabilization of the DC level of the optical signal. Secondly, the angle of incidence,  $\theta$ , is adjusted to reduce the height of the instrument so that it will fit within

the 1" space requirement. Thirdly, the surface topography measurement capability feature of the instrument is incorporated within the phase/specular detectors 808 and 809 shown in FIGS. 8 and 9. The position sensitive detectors 808 and 809 (quadrant detectors) serve as both phase detectors, specular detectors, and topography measurement detectors. Fourthly, the size may be decreased by using a polarizing beam splitter 901 as shown in FIG. 9 instead of a Wollaston prism 807 as shown in FIG. 8. The polarizing beam splitter 807 or Wollaston prism 901 is rotated at 45.degree. with respect to the plane of incidence.



Creation date: 11-18-2003

Indexing Officer: NIFILL - NICOLE IFILL

Team: OIPEBackFileIndexing

Dossier: 09957468

Legal Date: 07-31-2003

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3	1449	11

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Remarks:

Order of re-scan issued on .....